(FILE 'HOME' ENTERED AT 14:44:49 ON 16 AUG 2005)

FILE 'REGISTRY' ENTERED AT 14:44:54 ON 16 AUG 2005
L1 86 S FARNESOL

FILE 'HCAPLUS, MEDLINE' ENTERED AT 14:46:11 ON 16 AUG 2005
L2 11 S L1 AND (INHALE OR INHALATION OR INHALING)
L3 10 DUP REM L2 (1 DUPLICATE REMOVED)

L3 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
AN 2004:208008 HCAPLUS
DN 140:401678
TI The Effect of Tobacco Blend Additives on the Retention of Nicotine and Solanesol in the Human Respiratory Tract and on Subsequent Plasma Nicotine Concentrations during Cigarette Smoking
AU Armitage, Alan K.; Dixon, Michael; Frost, Barrie E.; Mariner, Derek C.; Sinclair, Neil M.
CS Sycamore Lodge, North Yorkshire, HG5 8X, UK
SO Chemical Research in Toxicology (2004), 17(4), 537-544
CODEN: CRTOEC; ISSN: 0893-228X
PB American Chemical Society
DT Journal
LA English
AB The influence of the tobacco additives diammonium hydrogen phosphate (DAP) and urea on the delivery and respiratory tract retention of nicotine and solanesol and on the uptake of nicotine into venous blood was investigated in 10 smokers under mouth-hold and 75 and 500 mL **inhalation** conditions. Three cigarettes with identical phys. specifications were produced from a common lamina tobacco blend. The control cigarette contained nonammoniated reconstituted tobacco sheet (RTS), whereas DAP and other ammonia compds. were added to the RTS of the second cigarette. Urea was added to the tobacco of the third cigarette. The presence of DAP or urea in the test cigarettes did not significantly influence solanesol retention within the mouth during the mouth-hold condition. Nicotine retention within the mouth during the mouth-hold condition was, however, significantly higher for the DAP cigarette (64.3%) than for the urea (53.3%) or control cigarette (46.3%), but this did not result in an increase in nicotine uptake into venous blood. Solanesol retentions during the 75 and 500 mL **inhalation** volume conditions and nicotine retentions during the 75 mL **inhalation** volume condition were not significantly different for the three cigarette types. Although the nicotine retention approached 100% with each cigarette type during the 500 mL **inhalation** condition, the nicotine retention for the urea-treated cigarette (99.6%) was marginally, but statistically, significant, higher than for the control (99.1%) and DAP-treated cigarettes (98.8%). There were no statistically significant differences between the indexes of nicotine uptake into venous blood for the three cigarette types in any of the **inhalation** conditions.
RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 2 OF 10 MEDLINE on STN
AN 2004040494 MEDLINE
DN PubMed ID: 14740743
TI Development of a method to assess cigarette smoke intake.
CM Erratum in: Environ Sci Technol. 2004 Nov 1;38(21):5824
AU Watson Clifford; McCraw Joan; Polzin Gregory; Ashley David; Barr Dana
CS National Center for Environmental Health, Centers for Disease Control and Prevention, 4770 Buford Highway, NE, MS F-47, Atlanta, Georgia 30341, USA.. cow1@cdc.gov
SO Environmental science & technology, (2004 Jan 1) 38 (1) 248-53.
Journal code: 0213155. ISSN: 0013-936X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200403
ED Entered STN: 20040127
Last Updated on STN: 20040331
Entered Medline: 20040330
AB Tar and nicotine deliveries of cigarettes measured using current standardized smoking machine protocols provide poor estimates of smoke exposure. The characteristics of human smoking behavior vary considerably and differ from the rigid parameters used with current standardized smoking machine protocols. Current alternatives, including measurement of biomarkers, are invasive, time-dependent, and can be too expensive to be used as mechanisms for carrying out large-scale investigations required to

help determine the influence of cigarette design on smoking behaviors. To obtain more reasonable estimates of mainstream smoke exposure, we developed a method to quantitatively measure solanesol, a naturally occurring component in tobacco that is deposited during smoking in the cigarette filter butt. Quantification of solanesol extracted from the filters using liquid chromatography and tandem mass spectrometry is efficient, rapid, and extremely reliable. We found that the amount of solanesol deposited in a cigarette filter is related to the mainstream smoke deliveries of tar and nicotine under a variety of smoking conditions. In addition, the amount of solanesol trapped in the filter remains stable at least 4 weeks after smoking. Measuring solanesol in cigarette filters as an exposure marker provides a noninvasive means to obtain reasonable estimates of mainstream tar and nicotine smoke deliveries under a wide variety of smoking conditions.

L3 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:138128 HCAPLUS
DN 142:405888
TI The effect of **inhalation** volume and breath-hold duration on the retention of nicotine and solanesol in the human respiratory tract and on subsequent plasma nicotine concentrations during cigarette smoking
AU Armitage, A. K.; Dixon, M.; Frost, B. E.; Mariner, D. C.; Sinclair, N. M.
CS Sycamore Lodge, Knaresborough, HG5 8X, UK
SO Beitraege zur Tabakforschung International (2004), 21(4), 240-249
CODEN: BTAID3; ISSN: 0173-783X
PB Verband der Cigarettenindustrie
DT Journal
LA English
AB The influence of **inhalation** depth and breath-hold duration on the retention of nicotine and solanesol in the human respiratory tract and on nicotine uptake was studied in ten cigarette smokers. In a first series of expts., the subjects took seven puffs from a 10 mg 'tar' yield, test cigarette and a fixed volume of air (0, 75, 250, 500 or 1000 mL, as required by the protocol) was inhaled after each puff in order to give a controlled 'depth' of **inhalation**. The **inhalation** was drawn from a bag containing the required volume of air. Following a 2 s breath-hold, subjects exhaled normally, with the first exhalation after each puff passing through a single acidified filter pad for collection of the non-retained nicotine and solanesol. Blood samples were taken before and at intervals during and after smoking for the sessions with 0, 75 and 500 mL **inhalation** vols. for determination of plasma nicotine and carboxyHb levels. Another series of expts. was conducted with a fixed **inhalation** volume (500 mL) and two further breath-hold durations (0 and 10 s) in addition to 2 s from above. Nicotine and solanesol retentions were measured for each breath-hold condition. The amts. of nicotine retained within the respiratory system, expressed as a percentage of the amount taken into the mouth, were consistently higher than the corresponding values for solanesol in all five **inhalation** conditions (0-1000 mL, 2 s breath-hold). Nicotine retention increased from 46.5% at zero **inhalation** to 99.5% at 1000 mL **inhalation** (2 s breath-hold) and from 98.0% at zero breath-hold to 99.9% at 10 s breath-hold (500 mL **inhalation**). Solanesol retention increased from 34.2% at zero **inhalation** volume to 71.9% at 1000 mL **inhalation** (2 s breath-hold) and from 51.8% at zero breath-hold to 87.6% at 10 s breath-hold (500 mL **inhalation**). Plasma nicotine decreased from pre-smoking levels after zero **inhalation** indicating that the nicotine retained within the mouth was poorly absorbed into the systemic circulation. After 75 mL **inhalation**, plasma nicotine levels were significantly greater than for zero **inhalation** but not significantly less than after 500 mL **inhalation** except at the time of maximum nicotine concentration As in every exptl. condition, a higher percentage of nicotine than solanesol was retained within the respiratory tract, it was concluded that the difference in retention of the moderately volatile nicotine and the non-volatile solanesol is consistent with the concept of nicotine evaporation from smoke particles and the subsequent efficient retention in the airways of gaseous nicotine. The retention of solanesol followed the expected pattern of particulate deposition i.e., an increase with both increasing

depth of **inhalation** and breath-hold duration. However, nicotine retention was almost complete even at shallow inhalations and short breath-hold durations.

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:472378 HCAPLUS
DN 139:41828
TI Respiratory infection prevention and treatment with terpene-containing compositions
IN Franklin, Lanny U.
PA Ximed Group Plc, USA
SO PCT Int. Appl., 52 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2003049726 | A1 | 20030619 | WO 2002-US39196 | 20021209 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | US 2003180349 | A1 | 20030925 | US 2002-314613 | 20021209 |
| | EP 1455768 | A1 | 20040915 | EP 2002-795778 | 20021209 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK | | | | |
| PRAI | US 2001-336628P | P | 20011207 | | |
| | WO 2002-US39196 | W | 20021209 | | |

AB Compns. and methods for prevention and treatment of a respiratory infection are disclosed. A composition comprising a single terpene, a terpene mixture, or a liposome-terpene (s) composition is disclosed. The composition can be a true solution of an effective amount of an effective terpene and a carrier such as water. The composition can be a suspension or emulsion of terpene, surfactant, and carrier. The compns. of the invention can be administered before or after the onset of the disease. Administration can be, for example, by spraying the respiratory tract with a solution of the present invention. Prevention and treatment of a respiratory infection by the **inhalation** of a solution containing a single bioactive terpene, a bioactive terpene mixture, or a liposome-terpene(s) composition before or after the onset of the infection is described. A true solution of terpene and water can be formed by mixing terpene and water at a solution-forming shear rate in the absence of a surfactant.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 5 OF 10 MEDLINE on STN
AN 2003231629 MEDLINE
DN PubMed ID: 12753732
TI Farnesol for aerosol **inhalation**: nebulization and activity against human lung cancer cells.
AU Wang Zhaolin; Chen H T; Roa Wilson; Finlay Warren
CS Aerosol Research Laboratory, Department of Mechanical Engineering, University of Alberta, Edmonton, Alberta, Canada.
SO Journal of pharmacy & pharmaceutical sciences [electronic resource] : a publication of the Canadian Society for Pharmaceutical Sciences, Societe canadienne des sciences pharmaceutiques, (2003 Jan-Apr) 6 (1) 95-100.
Journal code: 9807281. ISSN: 1482-1826.
CY Canada
DT Journal; Article; (JOURNAL ARTICLE)

LA English
FS Priority Journals
EM 200306
ED Entered STN: 20030520
Last Updated on STN: 20030608
Entered Medline: 20030606
AB PURPOSE: A nebulized aerosol formulation of the anti-cancer agent farnesol is developed and shown to induce cell death of human lung cancer cells in vitro. METHODS: A nebulized farnesol formulation containing polysorbate 80 (Tween 80) is developed. The measurements of the aerosol properties during nebulization were used as input for a mathematical model of airway surface liquid in the lung of an average adult, to estimate the airway surface liquid drug concentration of the deposited farnesol. Cytotoxicity of the formulations was measured in vitro on non-small cell lung cancer cells (H460 and A549). RESULTS: As much as 100% of lung cancer cytotoxicity can be achieved by using Pari LC Star and LC Plus nebulizers. The estimated airway surface liquid concentrations of the deposited farnesol reveal that the IC50 of the nebulized farnesol can be achieved over the entire tracheobronchial region, using the above Pari nebulizers with a volume fill of 5 ml. CONCLUSIONS: Drug concentrations higher than IC50 in the airway surface liquid are predicted with our methods, suggesting in vivo trials of a formulation may be warranted with these particular nebulizers.

L3 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:403378 HCAPLUS
DN 129:145818
TI 12-Month **inhalation** study on room-aged cigarette sidestream smoke in rats
AU Haussmann, Hans-Jurgen; Gerstenberg, Birgit; Gocke, Werner; Kuhl, Peter; Schepers, Georg; Stabbert, Regina; Stinn, Walter; Teredesai, Ashok; Tewes, Franz; Anskeit, Erwin; Terpstra, Piter
CS INBIFO, Institut Biologische Forschung, Koln, Germany
SO Inhalation Toxicology (1998), 10(7), 663-697
CODEN: INHTE5; ISSN: 0895-8378
PB Taylor & Francis
DT Journal
LA English
AB The present study extends the current scope of rat **inhalation** studies on surrogates of environmental tobacco smoke. The 12-mo **inhalation** period enabled an investigation of the potential progression or occurrence of new morphol. effects from subchronic to chronic **inhalation**. In addition, pulmonary inflammation and oxidative DNA damage were investigated. Female Wistar rats were whole-body exposed to room-aged cigarette sidestream smoke (RASS) generated from the reference cigarette 1R4F at 6 and 12 μg total particulate matter/L for 12 h/day, 5 days/wk, for 12 mo. To enable an evaluation of the exposure mode, another group of rats was exposed head-only to 12 μg total particulate matter/L for 7 h/day. Whole-body exposure conditions per se resulted in changes of the RASS composition An anal. of urinary nicotine metabolites showed that with whole-body exposure, RASS components, such as nicotine, were addnl. taken up by routes other than **inhalation**. Independent from the exposure mode, blood carboxyHb and the Hb adduct of 4-aminobiphenyl were used as biomarkers for the RASS concentration and dose, resp. Histopathol. changes were minimal to moderate reserve-cell hyperplasia and slight squamous metaplasia of the respiratory epithelium, as well as minimal reserve-cell hyperplasia and atrophy of the olfactory epithelium in the anterior nasal cavity; slight eosinophilic globules in sustentacular cells of the olfactory epithelium in the anterior and posterior nasal cavity; pronounced squamous metaplasia and hyperplasia in the larynx at the base of the epiglottis; and slight reserve-cell hyperplasia in the bronchial respiratory epithelium. Most of the changes were adaptive and similar in type and degree to those seen in previous subchronic RASS **inhalation** studies. A flow cytometric anal. of bronchoalveolar lavage cells, i.e., alveolar macrophages, lymphocytes, and polymorphonuclear leukocytes, did not show signs of pulmonary inflammation after 6 or 12 mo of **inhalation**. As a measure for oxidative DNA modifications, 8-hydroxydeoxyguanosine was determined

in the lungs and nasal epithelia. No change was seen for this parameter at either time point in the lungs. There was a slight but not consistent increase in the nasal respiratory and olfactory epithelia as well as in urinary 8-hydroxydeoxyguanosine excretion. In summary, there was little indication for progression or occurrence of new effects from 3 or 6 mo to 12 mo of RASS **inhalation**. There were also no signs of inflammation or oxidative DNA modification in the lungs. Chronic head-only exposure to RASS was shown to be tech. feasible and is generally considered preferable for smoke **inhalation** studies over whole-body exposure to avoid artificial changes in smoke composition and the noninhalative uptake of smoke constituents.

RE.CNT 83 THERE ARE 83 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1999:109689 HCAPLUS
DN 130:149773
TI Environmental tobacco smoke and respirable suspended particle exposures for non-smokers in Beijing, China
AU Phillips, Keith; Howard, David A.; Bentley, Mark C.; Alvan, Gunnar
CS Dep. Air Quality Monitoring, Covance Lab. Ltd., Harrogate, HG3 1PY, UK
SO Indoor+Built Environment (1998), 7(5/6), 254-269
CODEN: IBENFP; ISSN: 1420-326X
PB S. Karger AG
DT Journal
LA English
AB The study comprised housewives in a 1st group, primarily for assessing exposures in the home, and office workers in a 2nd group to assess the contribution of the workplace to overall exposure. Non-smoking subjects collected air samples near to their breathing zone by wearing personal monitors for 24 h. Samples collected were analyzed for respirable suspended particles (RSP), nicotine, 3-ethenylpyridine, and environmental tobacco smoke (ETS) particles using UV absorbing particulate matter (UVPM), fluorescing PM (FPM), and solanesol-related PM (SolPM) measurements. Saliva cotinine analyses were also undertaken to confirm the non-smoking status of the subjects, and a misclassification rate between 3.4-3.8% was estimated RSP levels with median 24-h time-weighted average concns. were 70 μg/m3 for housewives living in non-smoking households and 114 μg/m3 for office workers living and working in smoking environments. High background levels of unidentified airborne fluorescing compds. in Beijing resulted in abnormally high FPM ests. and precluded the use of this marker in the assessment of ETS exposure. The highest exposures of ETS particles (SolPM) and nicotine were estimated for office workers living and working in smoking environments, comparable to the potential **inhalation** of 5-11 cigarette equivs./yr (CEs/y), based upon median exposures, with the workplace contributing approx. 40% of annual exposure. The potential **inhalation** of the most highly exposed subjects, based upon 90th percentile exposure, was 32-46 CEs/y.

RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1998:656408 HCAPLUS
DN 129:264549
TI Assessment by personal monitoring of respirable suspended particles and environmental tobacco smoke exposure for non-smokers in Sydney, Australia
AU Phillips, K.; Howard, D. A.; Bentley, M. C.; Alvan, G.
CS Dep. Air Quality Monitoring, Covance Lab. Ltd., Harrogate, HG3 1PY, UK
SO Indoor+Built Environment (1998), 7(4), 188-203
CODEN: IBENFP; ISSN: 1420-326X
PB S. Karger AG
DT Journal
LA English
AB Exposure to environmental tobacco smoke (ETS) particles and respirable suspended particles (RSP) for 319 self-reported non-smokers was assessed by personal monitoring. The subjects were separated into 4 distinct groups for investigation: home, work, elsewhere, and 24-h, which were further sub-divided based on whether they lived or worked with smokers. Saliva

samples for cotinine anal. were taken at the start and end of each monitoring session. Good correlations (R2>0.86) were found between the 3 methods used to assess the contribution of ETS particles to RSP from all sources. Annual exposure ests. for ETS particles and nicotine in smoking homes were greater than in smoking workplaces. Median annual exposure in smoking homes and workplaces equates to <4 cigarette equivalent per yr. (CE/yr). Exposures in non-smoking homes, non-smoking workplaces, and away from home and workplace were below the limit of quantification. The highest exposed subjects would potentially **inhale** no more than 15 CE/yr. Subjects living with smokers had greater ETS exposure while away from home and work compared to subjects living with non-smokers. This elsewhere group was also exposed to the highest RSP concns. Questionnaire data indicated that subjects consider bars/restaurants to be locations where they are exposed to most ETS in their daily lives. However, 62% of these subjects considered their exposure in these locations to be 'none' or 'very low' during the monitoring period. Saliva cotinine detns. are a good marker for evaluation of ETS exposure at 90th percentile levels.

L3 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:412206 HCAPLUS
DN 122:204810
TI Effects of volatile compounds from leaf oil on blood pressure after exercising
AU Suzuki, Masaharu; Aoki, Taro
CS Fac. Agriculture, Tokyo Univ. Agriculture and Technol., Fuchu, 183, Japan
SO Mokuzai Gakkaishi (1994), 40(11), 1243-50
CODEN: MKZGA7; ISSN: 0021-4795
PB Nippon Mokuzai Gakkai
DT Journal
LA Japanese
AB Biol. activities have been found in many chemical compds. of leaf oils, and terpenes emitted from leaves are important substances for green-air baths. Young leaves were collected from eight-year-old trees of hinoki (Chamaecyparis obtusa S. and Z. Endl.) and sugi (Cryptomeria japonica D. Don.). Terpenes were extracted from the leaves by steam distillation, and identification of the terpenes was conducted by gas chromatograph-mass spectroscopy. The main extractives were α-Terpinyl acetate for hinoki oil and α-Pinene for sugi oil. The influence of **inhalation** of volatile terpenes on the blood pressure of human subjects was investigated. The subjects after jogging immediately entered a small test room for **inhaling** the vapors of volatile terpenes. A few minutes later, the maximum (systolic) blood pressure raised by jogging by the **inhaling** subjects were lessened more rapidly than by the controls (without **inhalation**) with reliance on statistical anal. Min. (diastolic) blood pressures of some subjects with **inhalation** were increased slightly above the controls. Their pulse rates were greater than the controls. It was supposed that the rapid lessening in maximum blood pressure and the increasing min. blood pressure and pulse rate were induced by stimulation by odoriferous substances like volatile terpenes. Other subjects marked off a number in random sampling digits after **inhaling** the vapors of volatile terpenes. Speed of marking off was slightly raised by the **inhalation**, although statistical confidence could not be obtained. The volatile terpenes act as stimulants. Because the leaf oils have many volatile compds., and their concns. in air may vary, further investigations must be made for the explanation of the above-mentioned phenomena.

L3 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1993:462896 HCAPLUS
DN 119:62896
TI Fragrance compounds and essential oils with sedative effects upon **inhalation**
AU Buchbauer, Gerhard; Jirovetz, Leopold; Jaeger, Walter; Plank, Christine; Dietrich, Hermann
CS Inst. Pharm. Chem., Univ. Vienna, Vienna, A-1090, Austria
SO Journal of Pharmaceutical Sciences (1993), 82(6), 660-4
CODEN: JPMSAE; ISSN: 0022-3549

DT Journal
LA English
AB Fragrance compds. and essential oils with sedative effects influence the motility of mice in **inhalation** studies under standardized conditions. A significant drop in the motility of mice was registered following exposure to these fragrances. The same results were achieved when the mice were artificially induced into overagitation by i.p. application of caffeine and subsequently subjected to **inhalation** of fragrance compds. and essential oils. These results proved the sedative effects of these fragrants via **inhalation** exposure in lower concns. Blood samples were taken from mice after a 1-h **inhalation** period. Chromatog. and spectroscopic methods were used to detect and characterize the actual effective compds. after solid-phase extraction Serum concns. of 42 different substances, including fragrance compds., were found in low ranges (ng/mL serum). The results contribute to the correct interpretation of the term aroma therapy (i.e., a stimulating or sedative effect on the behavior of individuals only upon **inhalation** of fragrance compds.).

(FILE 'HOME' ENTERED AT 15:14:46 ON 16 AUG 2005)

FILE 'REGISTRY' ENTERED AT 15:14:54 ON 16 AUG 2005
L1 64 S CEDROL OR CEDRENOL OR GLOBULOL

FILE 'MEDLINE, BIOSIS, EMBASE, HCAPLUS' ENTERED AT 15:15:27 ON 16 AUG 2005
L2 1855 S L1
L3 20 S L2 AND (MOTIL? OR SLEEP OR SEDATIV? OR (AUTONOMIC NERVE))
L4 16 DUP REM L3 (4 DUPLICATES REMOVED)

L4 ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:608921 HCAPLUS
DN 143:120075
TI Cosmetics containing solid volatile compounds
IN Yamaki, Kazuhiro; Tanabe, Yuichi; Sugai, Ichiro
PA Kao Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 16 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI JP 2005187371 | A2 | 20050714 | JP 2003-429160 | 20031225 |
| PRAI JP 2003-429160 | | 20031225 | | |

AB Cosmetics comprise volatile compds. which have a vapor pressure ≥ 1+10-5 mmHg at 25° and are solid state at 25°. The volatile compds. are selected from the group consisting of monoterpenes, sesquiterpenes, diterpenes, and aromatic compds. The cosmetics comprising the volatile compds. provide health beneficial effects, such as relaxation, sound **sleep**, and skin condition improvement. For example, a lotion containing cedrol was formulated.

L4 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:467888 HCAPLUS
DN 142:487695
TI Electrostatic atomization apparatus using **sedatives**
IN Akisada, Akisuke; Hirai, Toshihisa; Sugawa, Akihide; Mihara, Fumio; Imahori, Osamu; Yamauchi, Toshiyuki; Iwamoto, Shigemasa; Suda, Hiroshi; Nakada, Takayuki
PA Matsushita Electric Works, Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI JP 2005137966 | A2 | 20050602 | JP 2003-374467 | 20031104 |
| PRAI JP 2003-374467 | | 20031104 | | |

AB The invention relates to an electrostatic atomization apparatus for atomizing a solution containing a **sedative** substance, e.g. cedrol, α-pinene, hexenol, and linalyl acetate, suitable for use prior to sleeping for relaxation.

L4 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:365526 HCAPLUS
DN 142:393779
TI Fiber products having washfast sedation effects and their preparation
IN Shiji, Tomiko; Sobashima, Mitsuo
PA Nisshin Spinning Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI JP 2005113288 | A2 | 20050428 | JP 2003-346534 | 20031006 |
| PRAI JP 2003-346534 | | 20031006 | | |

AB The fiber structures contain **sedative** or aroma-therapeutic component (e.g., lavender, chamomile, majorum, ylang-ylang, jasmine, rosewood, etc.)-supporting porous microparticles. The fiber structures, e.g., cotton, yarns, knitted, woven, or nonwoven fabrics, are prepared by allowing the microparticles to be bonded to fiber materials by pad/dry method. Thus, a plain-woven cotton cloth was padded with an aqueous binder composition containing cedrol-supporting porous silica and then dried at

120° for 60 s to have laundry-resistant sedation effect.

L4 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2005:275733 HCAPLUS
DN 142:322777
TI High-volatility smooth sesquiterpene alcohol composite particles and their manufacture
IN Miyamoto, Katsushi; Sasaki, Yasushi
PA Kao Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI JP 2005082585 | A2 | 20050331 | JP 2003-320185 | 20030911 |
| PRAI JP 2003-320185 | | 20030911 | | |

AB Title particles, useful for balancing autonomic nerves, improving **sleep**, etc. (no data), are manufactured by mixing polyethylene (I) with sesquiterpene alcs. with b.p. ≥250° at a temperature higher than the softening temperature (or m.p.) of I, then spraying the melted mixts. into air for cooling and solidification. Thus, spherical particles made of 70:30 Hiwax HW 200P (I) and cedrol released 6% and 30% cedrol at 40° and 80°, resp.

L4 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:986155 HCAPLUS
DN 141:416136
TI Sesquiterpene alcohol carriers
IN Takahashi, Keizo; Tojo, Satoshi; Hara, Katsutoshi
PA Kao Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI JP 2004323451 | A2 | 20041118 | JP 2003-122705 | 20030425 |
| PRAI JP 2003-122705 | | 20030425 | | |

AB The title carriers are made of fabrics with a sp. surface 0.9-3 m2/g, a basis weight 20-200 g/m2, and air permeation rate 2-40 mL/cm2·s measured by Frazier method. The carriers are impregnated with a solution of sesquiterpene alc. with a b.p. ≥ 250°, preferably cedrol, then dried to be used for controlling autonomic nervous systems, thereby bring **sedative** effects. For example, a nonwoven sheet with sp. surface 1.51 m2/g, a basis weight 90 g/m2 and air permeation rate 7 mL/cm2·s, was placed in an ethanolic solution of cedrol, then dried at the normal temperature The cedrol was diffused from the sheet for inhalation.

L4 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:584835 HCAPLUS
DN 141:107601
TI Fiber structures having **sleep**-improving effects and manufacturing methods therefor
IN Shiharu, Tomiko; Sobashima, Mitsuo
PA Nisshin Spinning Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI JP 2004204421 | A2 | 20040722 | JP 2003-412846 | 20031211 |
| PRAI JP 2002-362850 | A | 20021213 | | |

AB Fibers (100 parts) contain 0.0001-1.0 part cedrol. Thus, a cotton plain

weave fabric for pillow covers was treated with Riken Resin NFHO-W-CD (a microcapsule dispersion).

L4 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:516960 HCAPLUS
DN 141:346373
TI Antibacterial and antifungal effects of essential oils from coniferous trees
AU Hong, Eui-Ju; Na, Ki-Jeung; Choi, In-Gyu; Choi, Kyung-Chul; Jeung, Eui-Bae
CS Laboratory of Veterinary Biochemistry and Molecular Biology, College of Veterinary Medicine and Research Institute of Veterinary Medicine, Chungbuk National University, Chungbuk, 361-763, S. Korea
SO Biological & Pharmaceutical Bulletin (2004), 27(6), 863-866
CODEN: BPBLEO; ISSN: 0918-6158
PB Pharmaceutical Society of Japan
DT Journal
LA English
AB Essential oils have potential biol. effects, i.e., antibiotic, anticarcinogenic, and **sedative** effects during stress. In the present study, we investigated the antibacterial and antifungal effects of essential oils extracted from the coniferous species Pinus densiflora, Pinus koraiensis, and Chamaecyparis obtusa, because their biol. activities have not been yet elucidated. The essential oils were quantified using gas chromatog. and identified in gas chromatog.-mass spectrometric anal. Simultaneously, antibacterial and antifungal assays were performed using the essential oils distilled from the needles of coniferous trees. The major components and the percentage of each essential oil were: 19.33% β-thujene in P. densiflora; 10.49% α-pinene in P. koraiensis; 10.88% bornyl acetate in C. obtusa. The essential oils from P. densiflora and C. obtusa have antibacterial effects, whereas essential oils from P. koraiensis and C. obtusa have antifungal effects. These results indicate that the essential oils from the three coniferous trees, which have mild antimicrobial properties, can inhibit the growth of gram-pos. and gram-neg. bacteria and fungi.
RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:260892 HCAPLUS
DN 141:384037
TI Discovery of **sedative** effect of aromatic component cedrol, and its effect of sleeping improvement
AU Yada, Yukihiro
CS Second Health Care Group, Kao Co., Ltd., Japan
SO Nippikyo Janaru (2004), 26(2), 162-168
CODEN: NIJAEC; ISSN: 0913-0446
PB Nippon Sangyo Hifu Eisei Kyokai
DT Journal; General Review
LA Japanese
AB A review discussing the effect of cedrol on autonomic and central nervous system, and the mechanisms of the **sedative** and **sleep** -improving effects of cedrol is provided.

L4 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:582994 HCAPLUS
DN 141:420352
TI Effects of cedrol on the autonomic nervous system and **sleep**
AU Nagashima, Yoshinao
CS Healthcare Second Research Lab., Kao Corp., Japan
SO Koryo (2004), 222, 113-124
CODEN: KORYAR; ISSN: 0368-6558
PB Nippon Koryo Kyokai
DT Journal
LA Japanese
AB It was suggested that cedrol, which is sesquiterpene alc. contained in cedar wood oil, suppressed excitation caused by sympathetic nerve activity via the peripheral nervous system, which controls the airway and pulmonary function, rather than via olfaction, as well as enhancing parasympathetic

nerve activity, activating the central nervous system, and relaxing the mind and body in healthy adults. In this study, we evaluated the effects of cedrol on **sleep**, and found that smooth **sleep** induction and improvement of the maintenance of **sleep** function could be obtained with cedrol. In the rapidly changing social environment, the findings of this study suggested that cedrol is useful for facilitating comfortable living states.

L4 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:132334 HCAPLUS
DN 138:158861
TI **Sleep**-inducing dentifrices containing menthol and cedrene sesquiterpene alcohols
IN Itano, Morihide; Oshino, Kazushi; Nagashima, Yoshinao; Yata, Sachihiro
PA Kao Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI JP 2003048827 | A2 | 20030221 | JP 2001-234832 | 20010802 |
| PRAI JP 2001-234832 | | 20010802 | | |

AB The dentifrices contain (A) menthol (I) and (B) cedrene sesquiterpene alcs. such as cedrol or cedrenol at (A)/(B) weight ratio 1:0.01-10. The dentifrices show **sleep**-inducing effect because cedrene sesquiterpene alcs. suppress awakening effect of menthol. The cedrene sesquiterpene alcs. do not inhibit awakening effect of menthol in a parasympathicotonic state such as a time just after awakening. A dentifrice containing l-I 0.3, peppermint oil 0.2, spearmint oil 0.2, cedrol 0.004, sorbitol 30.0, glycerin 18.0, CaCO3 15.0, SiO2 7.5, Na lauryl sulfate 1.2, CM-cellulose 1.2, propylene glycol 0.5%, and H2O balance significantly shortened time for falling asleep.

L4 ANSWER 11 OF 16 MEDLINE on STN DUPLICATE 1
AN 2003364161 MEDLINE
DN PubMed ID: 12898420
TI The **sedative** effects and mechanism of action of cedrol inhalation with behavioral pharmacological evaluation.
AU Kagawa Daiji; Jokura Hiroko; Ochiai Ryuji; Tokimitsu Ichiro; Tsubone Hirokazu
CS Biological Science Laboratories, Kao Corporation, Haga-gun, Tochigi, Japan.
SO Planta medica, (2003 Jul) 69 (7) 637-41.
Journal code: 0066751. ISSN: 0032-0943.
CY Germany: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200310
ED Entered STN: 20030805
Last Updated on STN: 20031008
Entered Medline: 20031006
AB It has been reported that cedarwood oil has **sedative** effects when inhaled. In this study, we evaluated **sedative** effects of inhaled cedrol, which is a major component of cedarwood oil. Accumulative spontaneous motor activity was significantly decreased in the cedrol-exposed Wistar rats. Similar results were confirmed in caffeine-treated Wistar rats, spontaneously hypertensive rats (SHR), and ddY mice. In addition, exposure to cedrol prolonged pentobarbital-induced sleeping time in Wistar rats. To investigate whether cedrol, which has a very faint aroma, affects the olfactory system, the nasal cavities of Wistar rats were treated with zinc sulfate to reduce olfactory function. Two days later, the pentobarbital-induced **sleep** time was measured as described above. Compared to intact rats, the **sleep** prolongation effect was decreased in a lavender-roman chamomile mixed oil exposure positive control group, indicating that olfactory function was

impaired. In contrast, prolongation of the sleeping time did not change in the cedrol exposure group. The above findings indicate that cedrol inhalation had marked **sedative** effects regardless of the animal species or the functional state of the autonomic nerves, suggesting that the mechanism of action is via a pathway other than the olfactory system.

L4 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:840188 HCAPLUS
DN 140:228119
TI The physiological analysis for the **sedative** effect of cedrol
AU Yada, Yukihiro
CS Health Care Research Labs., Kao Corp., Japan
SO Aroma Research (2003), 4(3), 213-223
CODEN: ARREFJ; ISSN: 1345-4722
PB Fureguransu Janaru Sha
DT Journal; General Review
LA Japanese
AB A review. This study showed that cedrol, which is a sesquiterpene alc. contained in cedarwood oil, significantly prolonged the R-R interval of the ECG, decreased systolic and diastolic blood pressures. These results demonstrated that inhaled cedrol eased sympathetic excitation, shifted the autonomic activities to parasympathetic dominance, and reduced mental tension. Based on these effects on the parasympathetic nerve system, cedrol was expected to affect the **sleep**. Therefore we performed polysomnograph anal. to investigate the effect of cedrol. The findings showed that cedrol sedated the body and mind, improved the onset of **sleep**, and maintained **sleep**. The effects of cedrol on the autonomic nervous system, perception of its odor, and liking or disliking of it were evaluated in females living in the capital cities of 3 countries. Cedrol was shown to induce parasympathetic dominance in the subjects of all 3 countries despite marked differences in their phys. and social environments. In modern Japan, stress is increased by increasing social complexity, life is changing to an urban style, and various **sleep**-interfering factors affect our lifestyle. The results of this study suggest that cedrol is useful for the preparation of a more relaxing living environment.

L4 ANSWER 13 OF 16 MEDLINE on STN DUPLICATE 2
AN 2003541557 MEDLINE
DN PubMed ID: 14614968
TI Autonomic responses during inhalation of natural fragrance of Cedrol in humans.
AU Dayawansa Samantha; Umeno Katsumi; Takakura Hiromasa; Hori Etsuro; Tabuchi Eiichi; Nagashima Yoshinao; Oosu Hiroyuki; Yada Yukihiro; Suzuki T; Ono Tatketoshi; Nishijo Hisao
CS Department of Physiology, Faculty of Medicine, Toyama Medical and Pharmaceutical University, Sugitani 2630, Toyama 930-0194, Japan.
SO Autonomic neuroscience : basic & clinical, (2003 Oct 31) 108 (1-2) 79-86.
Journal code: 100909359. ISSN: 1566-0702.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200401
ED Entered STN: 20031119
Last Updated on STN: 20040131
Entered Medline: 20040130
AB It is well known that odors affect behaviors and autonomic functions. Previous studies reported that some compounds in cedar wood essence induced behavioral changes including **sedative** effects. In the present study, we analyzed cardiovascular and respiratory functions while subjects were inhaling fumes of pure compound (Cedrol) which was extracted from cedar wood oil.Vaporized Cedrol (14.2+/-1.7 microg/l, 5 l/min) and blank air (5 l/min) were presented to healthy human subjects (n=26) via a face mask, while ECGs, heart rate (HR), systolic blood pressure (SBP), diastolic BP (DBP), and respiratory rates (RR) were monitored. Statistical analyses indicated that exposure to Cedrol significantly decreased HR, SBP, and DBP compared to blank air while it increased

baroreceptor sensitivity. Furthermore, respiratory rate was reduced during exposure to Cedrol. These results, along with the previous studies reporting close relationship between respiratory and cardiovascular functions, suggest that these changes in respiratory functions were consistent with above cardiovascular alterations.Spectral analysis of HR variability indicated an increase in high frequency (HF) component (index of parasympathetic activity), and a decrease in ratio of low frequency to high frequency components (LF/HF) (index of sympathovagal balance) during Cedrol inhalation. Furthermore, Cedrol inhalation significantly decreased LF components of both SBP and DBP variability, which reflected vasomotor sympathetic activity. Taken together, these patterns of changes in the autonomic parameters indicated that Cedrol inhalation induced an increase in parasympathetic activity and a reduction in sympathetic activity, consistent with the idea of a relaxant effect of Cedrol.

L4 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:1038764 HCAPLUS
DN 142:487290
TI Quality control of a **sedative** herbal drug
AU Shabana, M. M.; El Fiki, N. M.; Shehata, I. A.; Shoukry, M.
CS Department of Pharmacognosy, Faculty of Pharmacy, Cairo University, Cairo, Egypt
SO Bulletin of the Faculty of Pharmacy (Cairo University) (2002), 40(1), 215-221
CODEN: BFPHA8; ISSN: 1110-0931
PB Cairo University, Faculty of Pharmacy
DT Journal
LA English
AB Dormival is a **sedative** herbal preparation in capsule form containing two ingredients namely exts. of Valeriana officinalis and Humulus lupulus. In the present study, the preparation is subjected to quality control procedures to establish its purity, safety, quality and efficacy. The methods applied include physicochem. and chromatog. anal., as well as densitometric determination of the active constituents. GC/MS anal. of the volatile oils of Valeriana and Hops revealed that the percentage of the major constituents of each oil are in agreement with the reported ones. Flavonoid content was determined densitometrically and was found to be 4.9-5.38 mg/g for hyperoside and 4.4-5.38 mg/g for quercetin per capsule. Valerenic acid was determined similarly and was found to be 10 mg/g per capsule. In addition, the label claim was evaluated by studying the **sedative** effect using different animal models. The extract of Dormival capsules showed a **sedative** effect in a dose of 50 mg/kg b.weight The presence of contaminants, such as microorganisms, aflatoxins, pesticide residues, heavy metals and radioactivity was examined to assure the safety of the product.
RE.CNT 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 16 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
AN 2002:421815 BIOSIS
DN PREV200200421815
TI The effects of cedrol on **sleep**.
AU Shirakawa, S. [Reprint author]; Nagashima, Y.; Ohsu, H.; Tojo, S.; Suzuki, M.; Yamamoto, Y. [Reprint author]; Yada, Y.; Suzuki, T.
CS National Institute of Mental Health, NCNP, Chiba, Japan
SO Journal of Sleep Research, (June, 2002) Vol. 11, No. Supplement 1, pp. 208-209. print.
Meeting Info.: 16th Congress of the European Sleep Research Society. Reykjavik, Iceland. June 03-07, 2002.
ISSN: 0962-1105.
DT Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
Conference; (Meeting Poster)
LA English
ED Entered STN: 7 Aug 2002
Last Updated on STN: 7 Aug 2002

L4 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:597788 HCAPLUS
DN 135:170507
TI Autonomic-controlling agents containing sesquiterpene alcohols
IN Nagashima, Yoshinao; Sugata, Keiichi; Yada, Yukihiro; Fukuda, Kazuyuki
PA Kao Corp., Japan
SO PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2001058435 | A1 | 20010816 | WO 2001-JP928 | 20010209 |
| | W: JP, US | | | | |
| | RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR | | | | |
| | EP 1170005 | A1 | 20020109 | EP 2001-902822 | 20010209 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| | US 2002151600 | A1 | 20021017 | US 2001-972887 | 20011010 |
| | US 2004048933 | A1 | 20040311 | US 2003-645554 | 20030822 |
| | US 2004039065 | A1 | 20040226 | US 2003-646825 | 20030825 |
| PRAI | JP 2000-38260 | A | 20000210 | | |
| | WO 2001-JP928 | W | 20010209 | | |
| | US 2001-972887 | A3 | 20011010 | | |

AB Disclosed are autonomic-controlling agents exerting **sedative**, **sleep**-inducing, and stress-relieving effects on humans regardless of differences among individuals in the sensitivity or preference to smell. These agents contain as the main active ingredient sesquiterpene alcs. having a b.p. of ≥ 250° under atmospheric pressure, in particular, cedrol.

RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT